Claims

1. Preparation for preventing and/or treating a tissue change, wherein the tissue change involves tissue of mesenchymal origin or tissue changes derived therefrom and the preparation contains an antiviral agent.

2. Preparation as claimed in claim 1, characterized in that the preparation is effective against a virus the nucleic acid of which contains at least one binding site for a gene product of genes of the HMGI(Y) family or derivatives thereof.

3. Preparation as claimed in claim 1, characterized in that the preparation is effective against a virus the nucleic acid of which codes for a gene product and this gene product interacts with at least one gene product of genes of the HMGI(Y) family or derivatives thereof.

4. Preparation as claimed in claim 2, characterized in that the binding site on the nucleic acid of the virus has the characteristic structural and sequence features of a first AT-rich sequence.

5. Preparation as claimed in claim 4, characterized in that the binding site on the nucleic acid of the virus, in addition to the first sequence, also has the following characteristic structural and sequence features:

   - a second AT-rich sequence is present and

   - the first and second sequence are arranged at a spatial distance from one another.

6. Preparation as claimed in claim 5, characterized in that the spatial distance is selected such that the first sequence and the second sequence are arranged relative to one another in one plane on the nucleic acid.

7. Preparation as claimed in one of the claims 1-6, characterized in that the genes of the HMGI(Y) family comprise MAG genes, HMGIC, HMGIY, aberrant transcripts of genes of the HMGI(Y) family and derivatives thereof.

8. Preparation as claimed in one of the claims 1-7, characterized in that the tissue of mesenchymal origin is at least partially infected with a virus.

9. Preparation as claimed in claim 8, characterized in that the virus is one which has been claimed in one of the previous claims.

10. Preparation as claimed in one of the claims 1 to 9, characterized in that the preparation is effective against a virus from the group of DNA viruses and in particular adenoviruses and/or herpes viruses.

11. Preparation as claimed in one of the claims 1 to 10, characterized in that the tissue of mesenchymal origin is at least partially infected with a virus from the group of DNA viruses and in particular adenoviruses and/or herpes viruses.

12. Preparation as claimed in one of the claims 1 to 11, characterized in that the tissue change involves tissue as the sole or obligatory component, wherein at least some of the cells of which the tissue is composed are infected with a virus as claimed in one of the previous claims.

13. Preparation as claimed in one of the claims 1 to 12, characterized in that the tissue change comprises a proliferation of at least one mesenchymal cell which is infected with a virus as claimed in one of the previous claims.

14. Preparation as claimed in claim 13, characterized in that the proliferation is a clonal proliferation.

15. Preparation as claimed in one of the claims 1-14, characterized in that the tissue change comprises an epithelial component.

16. Preparation as claimed in claim 15, characterized in that the epithelial component has at least one cell which is infected with a virus as claimed in one of the previous claims.

17. Preparation as claimed in one of the claims 1-16, characterized in that the cell infected with the virus as claimed in one of the previous claims has a chromosomal change.

18. Preparation as claimed in claim 17, characterized in that the chromosomal change affects at least one HMGI(Y) gene of the infected cell.

19. Preparation as claimed in claim 18, characterized in that the HMGI(Y) gene is selected from the group comprising MAG genes, HMGIC, HMGIY, aberrant transcripts of genes of the HMGI(Y) family and derivatives thereof.

20. Preparation as claimed in one of the claims 1-19, characterized in that the tissue change is selected from the group comprising leiomyomas, in particular leiomyomas of the uterus, endometrial polyps, endometriosis, fibroadenomas, in particular fibroadenomas of the mamma, phyllodes tumours, in particular of the mamma, hamartomas, in particular of the mamma, prostate adenomas, lipomas, aggressive angiomyxomas, enchondromas, pleomorphic adenomas, especially of the salivary glands of the head, colon polyps, especially colon adenomas, hamartomas, especially of the lung, atheromas and carcinomas that develop therefrom.

21. Preparation as claimed in claim 20, characterized in that the carcinomas that have formed are selected from the group comprising colon carcinomas and prostate carcinomas.

22. Preparation as claimed in one of the claims 1-21, characterized in that the virus is selected from the group comprising DNA viruses and in particular adenoviruses and herpes viruses.

23. Preparation as claimed in one of the claims 10 to 22, characterized in that the nucleic acid of the virus contains at least one binding site for a gene product of genes of the HMGI(Y) family or derivatives thereof.

24. Preparation as claimed in one of the claims 10 to 22, characterized in that the nucleic acid of the virus codes for at least one gene product and this gene product interacts with at least one gene product of genes of the HMGI(Y) family or derivatives thereof.

25. Preparation as claimed in claim 23, characterized in that the binding site on the nucleic acid of the virus has the characteristic structural and sequence features of a first AT-rich sequence.

26. Preparation as claimed in claim 25, characterized in that the binding site on the nucleic acid of the virus, in addition to the first sequence, also has the following characteristic structural and sequence features:

- a second AT-rich sequence is present and

- the first and second sequence are arranged at a spatial distance from one another.

27. Preparation as claimed in claim 26, characterized in that the spatial distance is selected such that the first sequence and the second sequence are arranged relative to one another in one plane on the nucleic acid.

28. Preparation as claimed in one of the claims 23 to 27, characterized in that the genes of the HMGI(Y) family comprise MAG genes, HMGIC, HMGIY, aberrant transcripts of genes of the HMGI(Y) family and derivatives thereof.

29. Preparation as claimed in one of the claims 1 to 28, characterized in that the agent is selected from the group comprising vaccines, antibodies, preparations that inhibit the replication, transcription or translation of viral genes in particular of genes of adenoviruses and/or herpes viruses; preparations that recognize and/or destroy cells infected by viruses especially adenoviruses and/or herpes viruses and preparations which achieve an antiviral effect by their effector-cell-stimulating action.

30. Preparation as claimed in claim 29, characterized in that the vaccine contains an antibody which is directed against the virus as claimed in one of the previous claims or a part thereof.

31. Preparation as claimed in claim 29, characterized in that the vaccine contains a particle of the virus as claimed in one of the previous claims or a part thereof.

32. Preparation as claimed in claim 30, characterized in that the antibody is selected from the group comprising monoclonal antibodies, polyclonal antibodies, polyvalent antibodies, antibody fragments and derivatives thereof.

33. Use of a preparation as claimed in one of the claims 29 to 32 to immunize against viruses that are associated with the pathogenesis and/or aetiology of tissue changes as claimed in one of the previous claims.

34. Use of the preparation as claimed in one of the claims 1-33 to produce a pharmaceutical composition comprising the preparation as claimed in one of the previous claims and a pharmaceutically acceptable carrier for the prevention and/or treatment of tissue changes as claimed in one of the

previous claims or to immunize against viruses that are associated with the pathogenesis and/or aetiology of tissue changes as claimed in one of the previous claims.

35. Use as claimed in claim 33 or 34, characterized in that the immunization is an active immunization.

36. Method for determining viruses that are suitable for producing a preparation for preventing and/or treating tissue changes as claimed in one of the previous claims and/or determining viruses against which the preparation as claimed in one of the previous claims is directed, which comprises the steps:

a) transfecting a cell culture having a normal karyotype which is derived from a tissue that contains the tissue change as claimed in one of the previous claims, with an expression vector for a gene of the HMGI(Y) family or a derivative thereof,

b) comparing the RNA pattern of the transfected cells with that of control cultures, and

c) examining RNA(s) that are expressed or expressed more strongly in the transfected cultures compared to the control cultures for the presence of viral elements by sequence homology.

37. Method for determining viruses that are suitable for producing a preparation for the prevention and/or treatment of tissue changes as claimed in one of the previous claims and/or for determining viruses against which the preparation as claimed in one of the previous claims is directed which comprises carrying out a PCR test in which the primer (pairs) used for the PCR conform to the viral nucleic acid sequence.

38. Method for determining viruses that are suitable for producing a preparation for preventing and/or treating tissue changes as claimed in one of the

previous claims and/or determining viruses against which the preparation as claimed in one of the previous claims is directed, which comprises the steps:

a) setting up a cDNA library of a tissue which contains the tissue change as claimed in one of the previous claims in which a gene of the HMGI(Y) family or a derivative thereof is activated or can be activated and

b) screening the cDNA library with a virus-specific probe or

c) analysing the cDNA clones for viral sequences or

d) comparing with a cDNA library from a normal reference tissue.

39. Method as claimed in one of the claims 36 to 38, characterized in that the gene of the HMGI(Y) family is selected from the group comprising HMGIC, HMGIY, MAG, aberrant transcripts of genes of the HMGI(Y) family and derivatives thereof.

40. Method as claimed in one of the claims 36 to 39, characterized in that the virus, the viral element or the virus-specific probe is selected from the group of viruses which comprises the viruses as claimed in one of the previous claims.

41. Use of a method as claimed in one of the claims 36 to 40 to determine viruses against which it is possible to immunize in order to prevent and/or treat tissue changes as claimed in one of the previous claims.

42. Device for determining a virus involved in the pathogenesis of tissue changes as claimed in one of the previous claims which comprises a gene product of genes of the HMGI(Y) family or a part thereof or derivatives thereof which is bound to a carrier.

43. Device as claimed in claim 42, characterized in that the viral nucleic acid in addition to the first sequence, also has the following characteristic structural and sequence features:

- a second AT-rich sequence is present and

- the first and second sequence are arranged at a spatial distance from one another.

44. Device as claimed in claim 43, characterized in that the spatial distance is selected such that the first sequence and the second sequence are arranged relative to one another in one plane on the nucleic acid.

45. Method for diagnosing a tissue change in which the tissue change comprises a tissue change as claimed in one of the previous claims, characterized in that a body fluid from a patient that may have such a tissue change is examined for the presence of antibodies against viruses as described in one of the previous claims, preferably DNA viruses and especially preferably adenoviruses and/or herpes viruses.

46. Method for diagnosing a tissue change in which the tissue change comprises a tissue change as claimed in one of the previous claims, characterized in that a body fluid from a patient that may have such a tissue change is examined for the presence of antigens of viruses as described in one of the previous claims, preferably DNA viruses and especially preferably adenoviruses and/or herpes viruses.

47. Method for diagnosing a tissue change in which the tissue change comprises a tissue change as claimed in one of the previous claims, characterized in that a tissue sample is reacted with a preparation which is selected from the group comprising antibodies which react with viruses as described in one of the previous claims, preferably DNA viruses and especially preferably adenoviruses and/or herpes viruses or parts thereof, antigens that are derived

from viruses as described in one of the previous claims, preferably DNA viruses and especially preferably adenoviruses and/or herpes viruses or parts thereof and a nucleic acid that can interact with the nucleic acid of viruses as described in one of the previous claims, preferably DNA viruses and especially preferably adenoviruses and/or herpes viruses, and if viruses as described in one of the previous claims and preferably DNA viruses and especially preferably adenoviruses and/or herpes viruses are present, a complex is formed from the preparation and the virus and the complex is detected.